

AMENDMENTS TO CLAIMS

1. (currently amended) An intravascular catheter device comprising:
 - an elongate catheter body having a proximal end and having a distal end;
 - an exterior deployment balloon having a thermally activated surface having surface features having a nominal height of between about 10 and 120 microns, said surface located proximate said distal end of said catheter body;
 - an interior deployment balloon located inside said exterior deployment balloon;
 - said interior balloon and said exterior balloon together forming and defining a drug reservoir between the opposed surfaces of said balloons;
 - a plurality of drug release apertures proximate said thermally activated surface communicating with said drug reservoir;
 - a fluid supply lumen in said catheter body coupled to said interior deployment balloon for inflating said interior deployment balloon to expand it and to pressurize the drug in said reservoir to assist in delivering the drug.
2. (original) The device of claim 1 further including a drug selected from the group comprising:
 - Rapamycin, and Rapamycin analogs, Taxol/Taxan, Actinomycin D, antisense dexamethasone, Angiopeptin Batimistat, Translast, Halofuginon, nicotine, heparin,
3. (original) The device of claim 1 wherein said thermally activated surface includes;
 - a plurality of shape memory plastic spines/tines having a first retracted position corresponding to a first temperature, and a second deployed position.
4. (currently amended) An intravascular catheter device comprising:
 - an elongate catheter body having a proximal end and having a distal end;
 - an exterior deployment balloon having a thermally activated surface, located proximate said distal end of said catheter body;
 - said thermally activated surface includes;
 - a plurality of shape memory plastic spines/tines having a first retracted position corresponding to a first temperature, and a second deployed position;
 - an interior deployment balloon located inside said exterior deployment balloon;

said interior balloon and said exterior balloon together forming and defining a drug reservoir between the opposed surfaces of said balloons;

a plurality of drug release apertures proximate said thermally activated surface communicating with said drug reservoir;

a fluid supply lumen in said catheter body coupled to said interior deployment balloon for inflating said interior deployment balloon to expand it and to pressurize the drug in said reservoir to assist in delivering the drug;

[The device of claim 3 wherein] said drug release apertures are uncovered by said spines when said spines are in said second deployed position.

5. (currently amended) An intravascular catheter device comprising:
an elongate catheter body having a proximal end and having a distal end;
a deployment balloon having a treatment surface located proximate said distal end;

said treatment surface having a plurality of spines extending from said surface a distance of between 10 and 120 microns;

a retractable sheath over said catheter body adapted for reciprocating motion from a first covered position covering said treatment surface to a second retracted position uncovering said treatment surface;

a fluid supply lumen in said catheter body coupled to said deployment balloon for inflating said deployment balloon to expand it into contact with said vessel wall.

6. (original) The device of claim 5 wherein:
said deployment surface includes an array of shape metal alloy spines, operated in the super elastic state to deploy upon the retraction of said sheath to said second retracted position.

7. (original) The device of 6 wherein:
said spines retract toward said deployment balloon upon the advancement of sheath toward a first position.

8. (currently amended) A method of treating a vessel comprising the steps:
deploying a balloon into the vessel of the type having a micro spine surface;

said micro spines having a height of between 10 and 120 microns;

inflating said balloon driving said micro spine surface into contact with the vessel wall.